



CONNECTICUT EPR WORKING GROUP: PACKAGING EPR AS A SOLUTION FOR ALL

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US Managing Director

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ABOUT LORAX EPI



Lorax Compliance Ltd. was founded in 2014 to help companies simplify the escalating scope and complexity of EPR around the world.



We calculate global EPR submission reports across a wide range of EPR areas using our bespoke software, including packaging, batteries, WEEE, textiles and deposit programs.



We support over 90 global businesses, and our team has multiple decades of experience in EPR and environmental stewardship.



We provide consulting expertise in EPR, packaging, and product sustainability for companies with an environmental conscience.

Specialists in global environmental packaging and product stewardship compliance

THE START OF PACKAGING EPR DISCUSSIONS IN CT



The Connecticut Task Force to Study Methods for Reducing Consumer Packaging that Generates Solid Waste met throughout 2017.

Read all task force-related activity [here](#).

Read the final report [here](#).

PACKAGING AND PRODUCT RECYCLING LEVIES

In many countries around the world, companies must pay levies on all product packaging and on the products they sell.

- **The levies are designed to fund recycling efforts**
- Extended Producer Responsibility (EPR) funding is to build infrastructure for collecting materials to be recycled
- Countries with EPR have more advanced recycling programs and technology

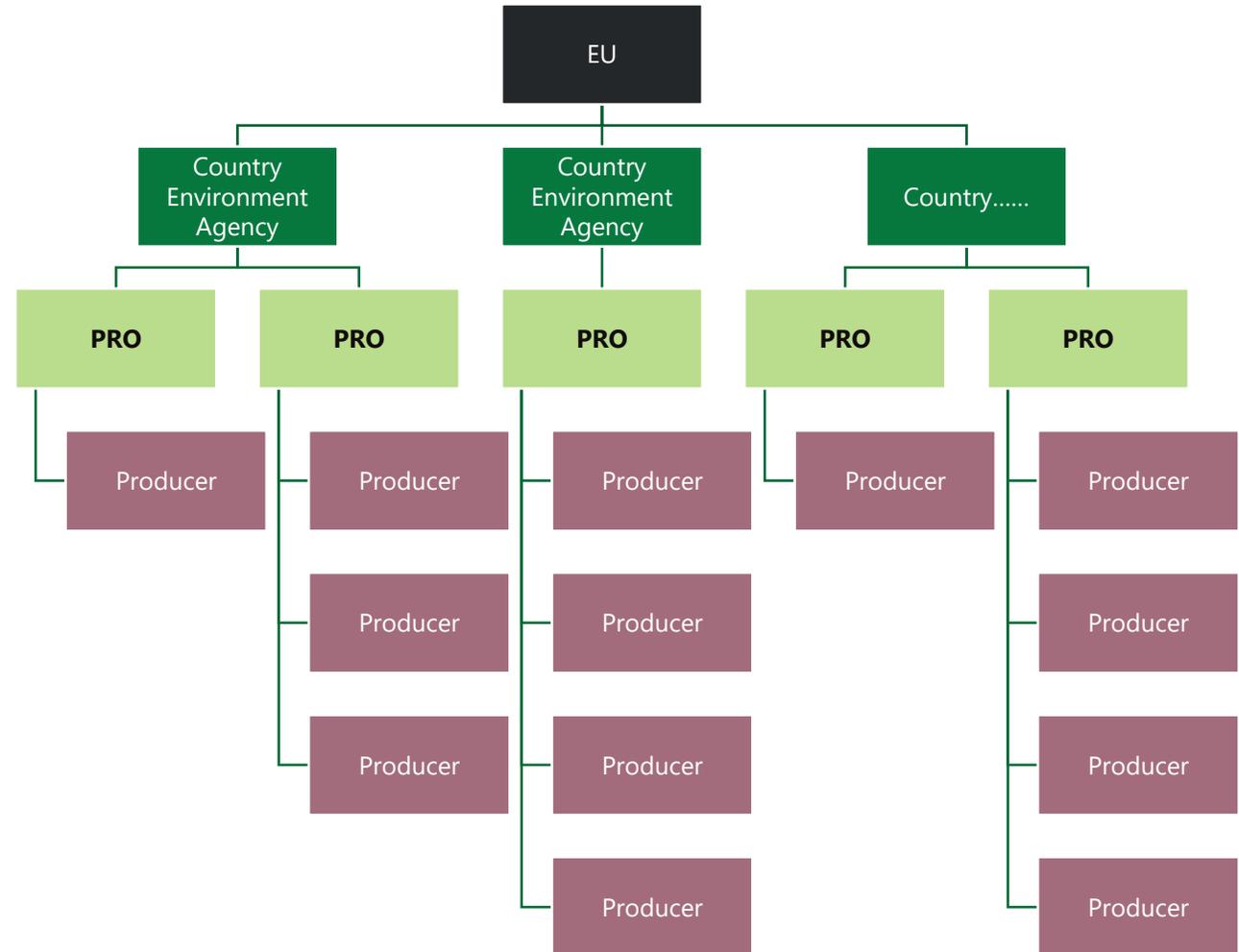
Packaging levies started in Germany in the early 1990s (der Grüne Punkt or Green Dot) and quickly spread to all European countries

- The compliance driver is the EU Packaging and Packaging Waste Directive
- More recently packaging levies have spread to other countries around the world
- The issue is referred to as green dot fees, packaging and product levies or EPR (Extended Producer Responsibility)



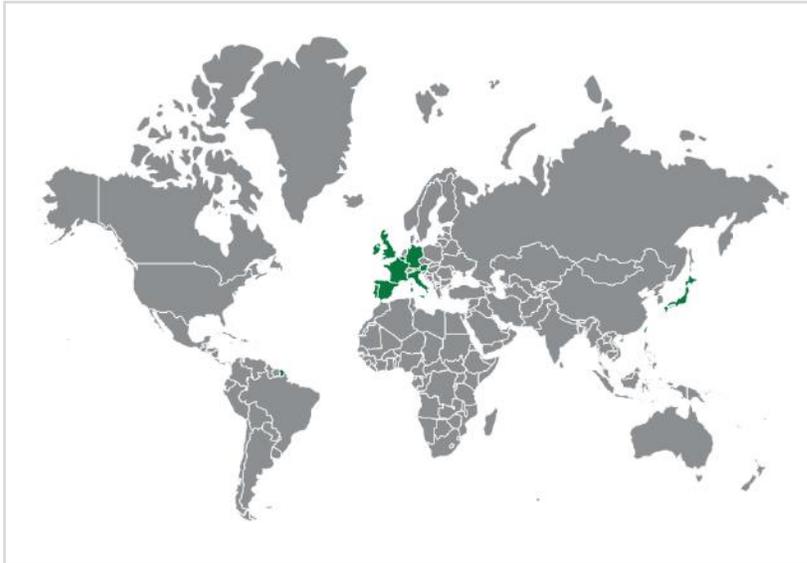
HOW DOES EPR WORK (EU)

- EU sets recycling targets
- Countries are required to report data on targets to the EU
- In each market, PROs will set up to manage a range of Producers
- Producers report to PROs / Compliance Schemes
- Report data on packaging materials placed on the market
- All packaging should be counted
- Costs based on weights by material
- Fees can be modulated based on additional

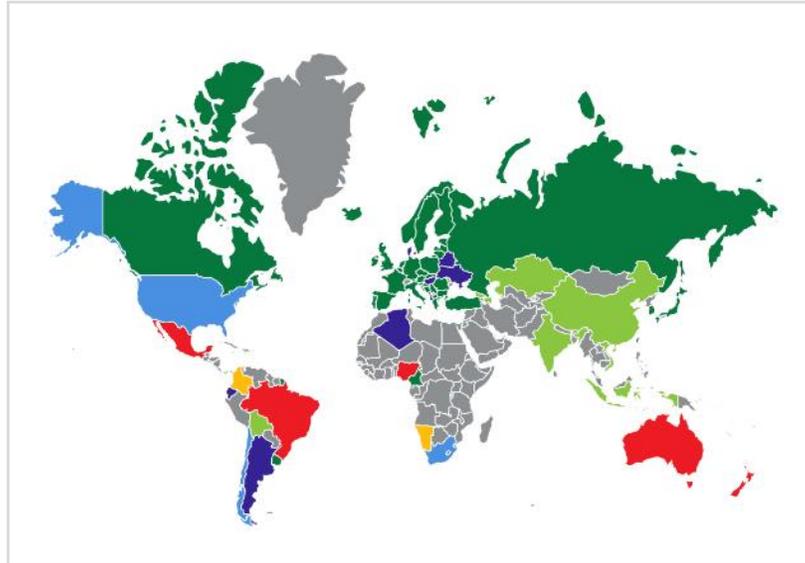


EPR LANDSCAPE EVOLVING AT FAST PACE

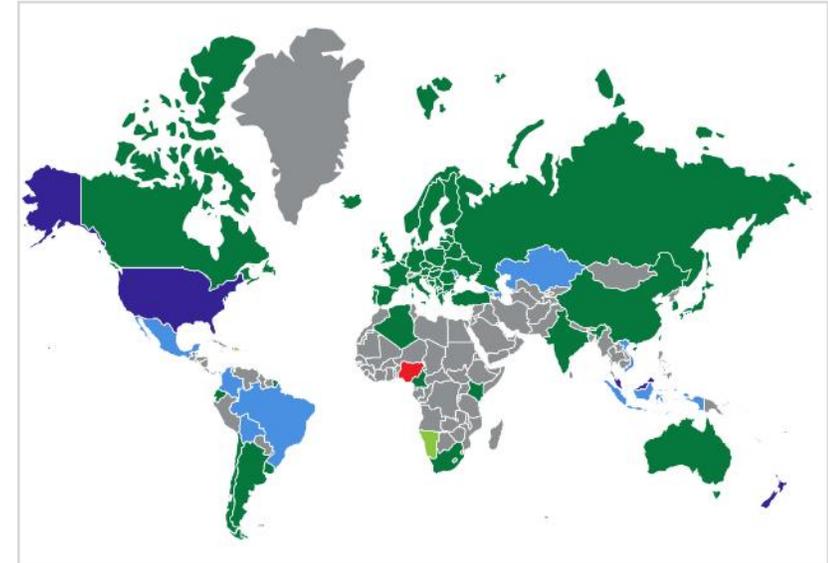
Packaging EPR in 2000



Packaging EPR in 2020



Packaging EPR in 2025

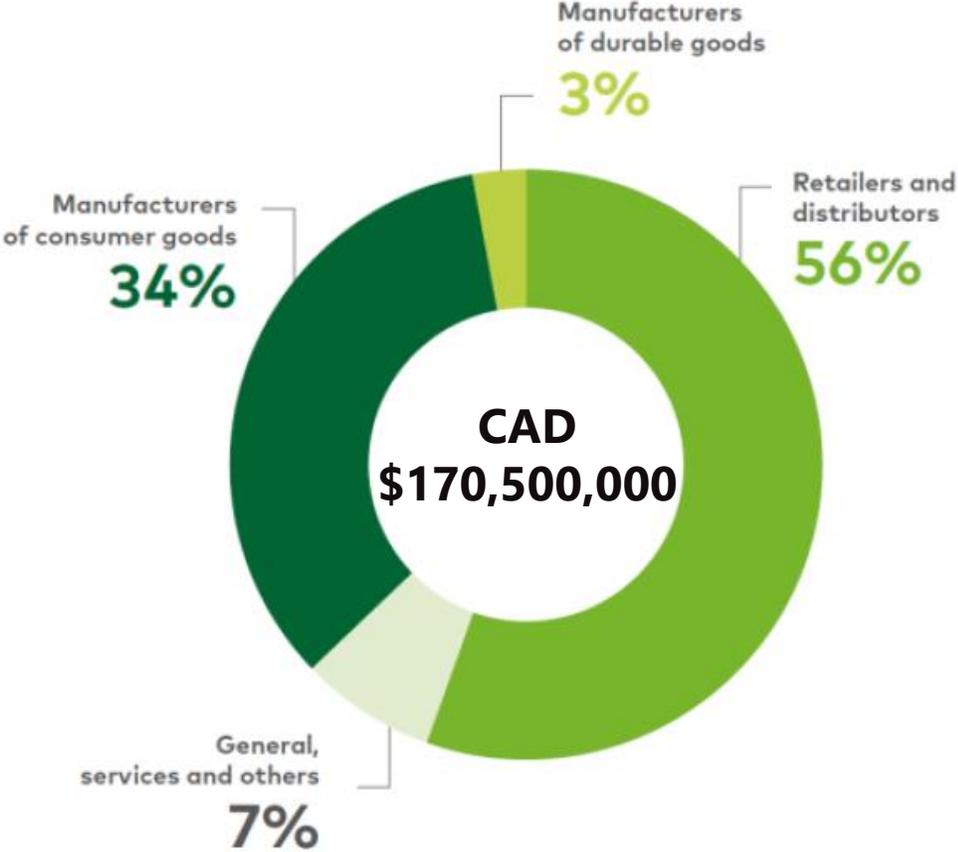


	Mandatory EPR
	Voluntary EPR
	Limited EPR
	EPR framework
	Emerging EPR framework
	Emerging EPR legislation

ÉCO ENTREPRISES QUÉBEC – WHERE MONEY COMES FROM

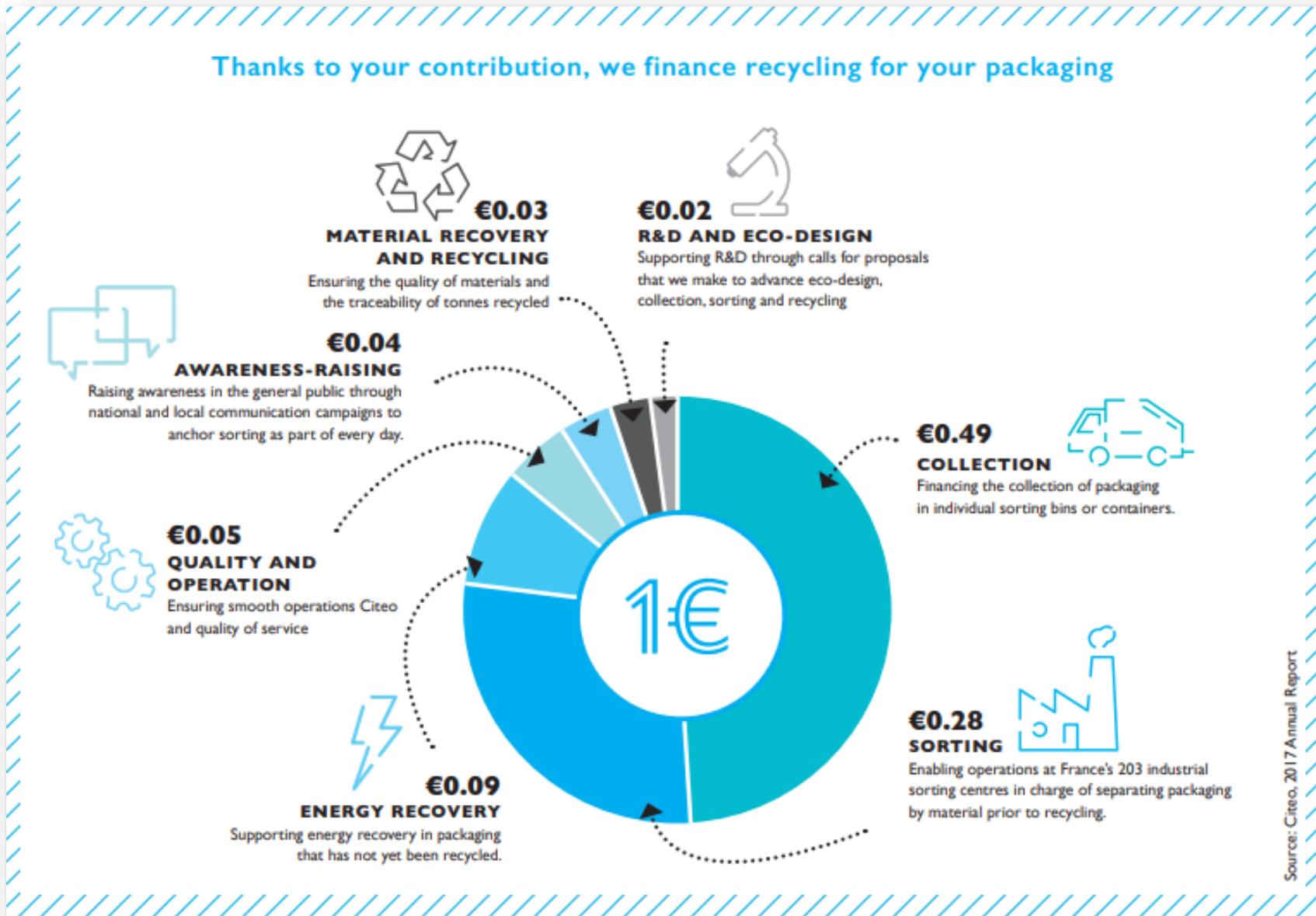


Hundreds of contributing companies generate close to 110 billion dollars in sales revenue in Québec



Source: ÉEQ, "A distinctive and collaborative approach to EPR for packaging and printed matter in Québec. 22 January 2020

CITEO (FRANCE) – WHERE YOUR MONEY GOES



Citizens serviced:
64,850,000

Net cost:
€665,000,000

Number of clients:
22,741

€10.25 per capita

THE COST OF PACKAGING EPR CANADA 2019

Source: CSSA Report to Stewards 2020, EEQ Consultation on the 2020 Schedule of Contributions

British Columbia (100% EPR)

Citizens serviced: 4,587,000
 Net cost: CAD \$101,236,146
\$22 CAD per capita
 (\$19 in 2018)
78.2% recovery rate

Saskatchewan (75% EPR)

Citizens serviced: 902,402
 Net cost: CAD \$10,617,712
\$12 CAD per capita
 (\$7 in 2018)
77.4% recovery rate

Québec (100% EPR) – 2018 Data

Citizens serviced: 8,345,193
 Net cost: CAD \$170,500,000
\$15.64 CAD per capita
 (\$13.50 in 2017)
63% recovery rate

Manitoba (80% EPR)

Citizens serviced: 1,208,607
 Net cost: CAD \$37,642,703
\$31 CAD per capita
 (\$30 in 2018)
80.3% recovery rate

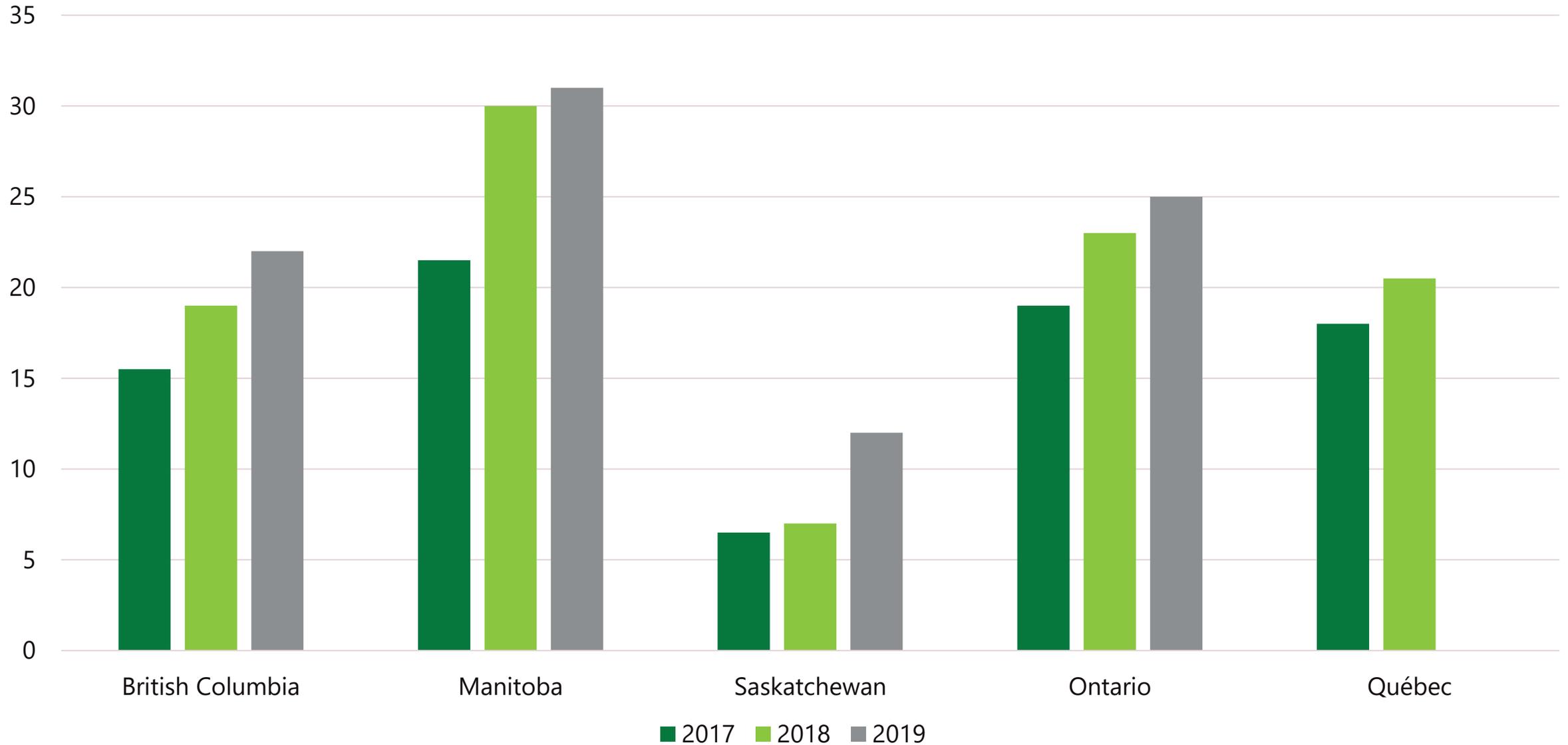
Ontario (50% EPR)

Citizens serviced: 13,205,235
 Net cost: CAD \$336,293,874
\$25 CAD per capita
 (\$23 in 2018)
60.2% recovery rate

MMSM Net Cost = 100% municipal costs, 100% commodity revenues, Promotion & Education, regulatory, market development and all other program management costs

SO Net Cost = supply chain costs, commodity revenues, P&E, market development and program management costs

Cost of EPR per Capita in Canada (CAD)



OREGON WORKING GROUP FINDINGS

IMPACT OF EPR ON RECYCLING RATES

OR Working Group findings show that EPR implementation has raised recycling rates in Canadian provinces and EU countries by as much as **44.3%**.

Jurisdiction	EPR Implemented	Pre-EPR Rate	Recycling Rate Methodology	Post-EPR Rate	Change	Recycling Rate Methodology
Ontario	2003	46% (2003) ⁵	Reported commodities sold (based on reports Municipal / MRF reports) divided by PPP in all waste and recycling collected, as measured in curbside waste composition study.	63% (2008) ⁶	+17%	Reported commodities sold (based on reports Municipal / MRF reports) divided by PPP in all waste, recycling and organics collected, as measured in curbside waste composition study.
Quebec	2005	20.5% (2000) ⁷	Capture of materials in recycling bins divided by total materials in waste and recycling collected, as measured in curbside waste composition study.	64.8% (2010) ⁸	+44.3%	Capture of materials generally accepted in curbside recycling ⁹ divided by total materials in waste, recycling and organics collected, as measured in curbside waste composition study.

Source: *Impact of EPR for PPP on Recycling Rates*. Resource Recycling Systems. 22 May 2020.

OREGON WORKING GROUP FINDINGS

IMPACT OF EPR ON RECYCLING MARKETS

The Working Group was asked to research if EPR has an effect on market stability in light of recent market disruptions (such as Southeast Asian import bans).

According to research, there are “significant changes in nearly all non-EPR jurisdictions studied, and few changes to jurisdictions with EPR.”

State	Removed specific recyclables collection (curbside and / or drop off)	Removed specific recyclables from curbside, still accepts drop off	Suspended entire recycling program	Total HH Impacted ³	% of HH in state Impacted
Maine	11,550	3,328	12,684	27,562	5.32
Michigan	83,297	8,026	8,931	100,254	2.65
Oregon ⁴	313,857	85,555	21,576 ⁵	420,998	31.56
Washington ⁶	1,019,621	125,612	15,441	1,160,674	51.10
Wisconsin	21,428	-	-	21,428	1.03
Total	1,449,753	222,521	58,632	1,730,906	17.32

Source: *Impact of EPR for PPP on Recycling Market Stability*. 27 May 2020.

OREGON WORKING GROUP FINDINGS

IMPACT OF EPR ON CPG PRICING

The Working Group compared prices for household goods (including foods and personal care items) in Canadian communities with and without EPR to see if EPR had any impact.

Data shows that prices remained the same in **76%** of communities studied.

Figure 5. Frequency of Pricing Differentials Between EPR and Non-EPR Comparison Communities (percentage of price change)



Note: Positive values indicate a higher price in jurisdictions with EPR for PPP policy; negative values indicate a higher price in the jurisdiction without EPR for PPP policy

Source: *Impact of EPR for PPP on Price of Consumer Packaged Goods*. Resource Recycling Systems. 2 June 2020.

REPORTING CATEGORIES VARY BY COUNTRY

Italy

Category	Material
PAPER	Paper
	Multimaterial Packaging Predominantly Paper
PLASTIC	Level A – Sortable & Recyclable C&I
	Level B1 – Household w/ Effective & Consolidated Sorting/Recycling
	Level B2 – Household Other Sortable & Recyclable
	Level C – Not Sortable/Recyclable
STEEL	Steel
ALUMINUM	Aluminum
GLASS	Glass
Wood	Wood

France

Category	Material
PAPER	Paper/Cardboard
	Brick
PLASTIC	Bottle/Vial in Clear PET
	Bottle/Vial in Coloured PET, PE or PP
	Rigid Packaging in PE, PP or PET
	Flexible PE
	PS Rigid
	Complex or Other Resins Excluding PVC
	Packaging Containing PVC
STEEL	Steel
ALUMINUM	Aluminum
GLASS	Glass
OTHER MATERIALS	Wood, Cork, Textiles, Etc.
	Stoneware, Porcelain, Ceramic

Belgium

Category	Material
PAPER	Paper/Cardboard (>85%)
PLASTIC	PET Bottles & Flasks – Transparent colourless
	PET Bottles & Flasks – Transparent blue
	PET Bottles & Flasks – Transparent other
	PET Rigid other - transparent
	HDPE Bottles & Flasks
	PP rigid
	PS hard packaging
	PE films
	Plastics Other
	STEEL
ALUMINUM	Aluminum (>50%)
GLASS	Glass
OTHER MATERIALS	Beverage Cartons
	Valorised
	Non-valorised
	Hazardous Household Waste
	Obstructive Packaging

EPR + BOTTLE BILLS

CANADA AND EU EXAMPLES

British Columbia:

- All ready-to-drink beverages except milk products

Manitoba:

- Beer only

Ontario

- All alcoholic beverages

Québec:

- All nonrefillable beer and carbonated soft drinks

Saskatchewan:

- All ready-to-serve beverage containers

Source: BottleBill.org

In Europe – Deposit Return (130M pop with DRS)



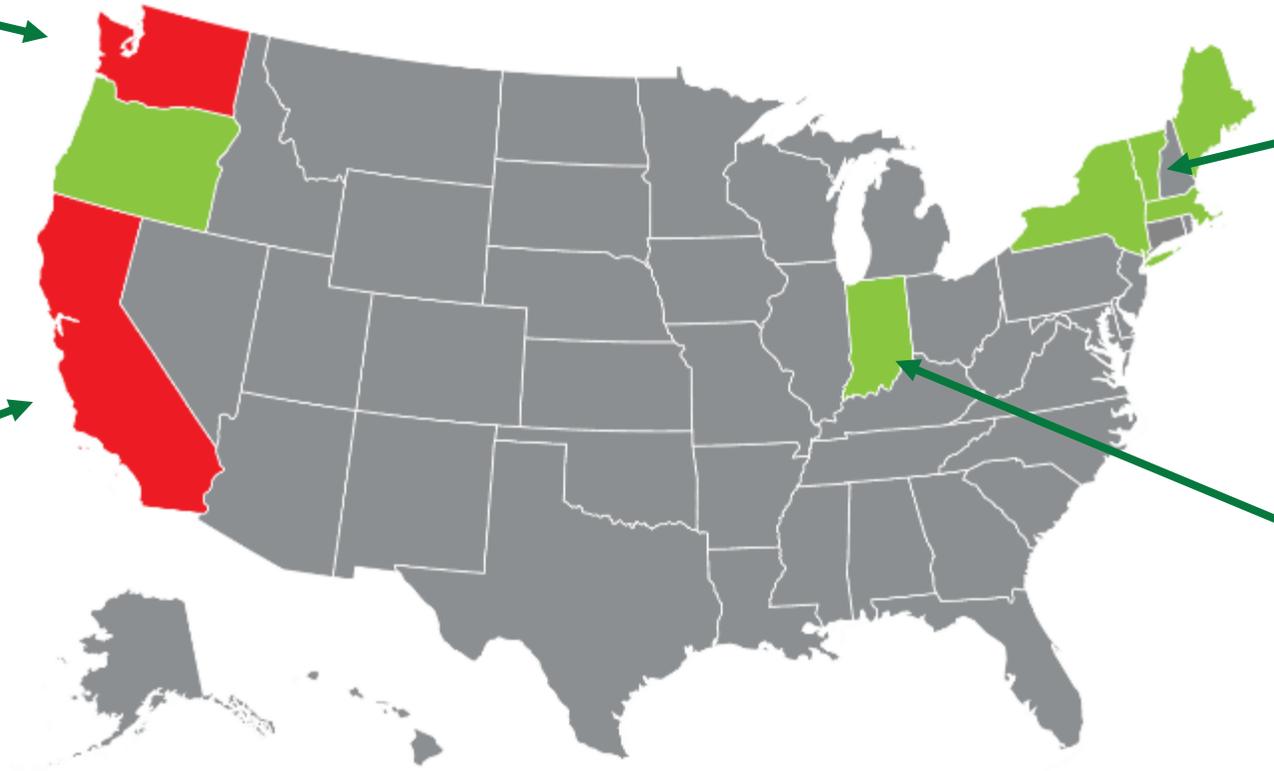
Source: Container Recycling Institute, "Bottle Bills – Benefits & Challenges" PPT, 17 July 2019

EXAMPLE EPR FEES ON BEVERAGE PACKAGING NOT COVERED BY BOTTLE BILLS

Packaging System	Image Example	Component	Material	Weight (g)
6 pack plastic ring handle for 12 oz cans		Handle	HDPE, pigmented	20
6 pack carton for 12 oz cans		Carton	Coated recycled boxboard (CRB)	62.5
6 pack shrink wrap for 12 oz cans	 <small>shutterstock.com • 1277345440</small>	Shrink sleeve	HDPE, film grade, pigmented	7.9

Sample EPR Fees in USD/1,000 units	British Columbia	Québec	Belgium
6 pack plastic ring	\$11.55	\$2.47	\$8.62
6 pack carton	\$20.43	\$11.34	\$8.79
6 pack shrink wrap	\$6.78	\$3.26	\$8.50

EPR BILLS IN THE USA



Washington bill reintroduced and retained on January 13, 2020. Would require stewardship organization participation for plastic packaging producers by 2022. Establishes PCR requirements and eco-modulated fees.

California bill for beverage container stewardship (all materials) failed on February 3. Currently funding a ballot initiative for single-use plastic packaging EPR and other SUP requirements.

Vermont bill passed the Senate and was referred to House Committee on June 16. It would prohibit hotels from providing personal care products in small containers and also establish PPP EPR by January 15, 2021.

Indiana bill would require EPR for packaging and paper as well as establish a goal of recycling 60% of all PPP by July 1, 2029.

- Full Packaging EPR
- Plastic Packaging EPR

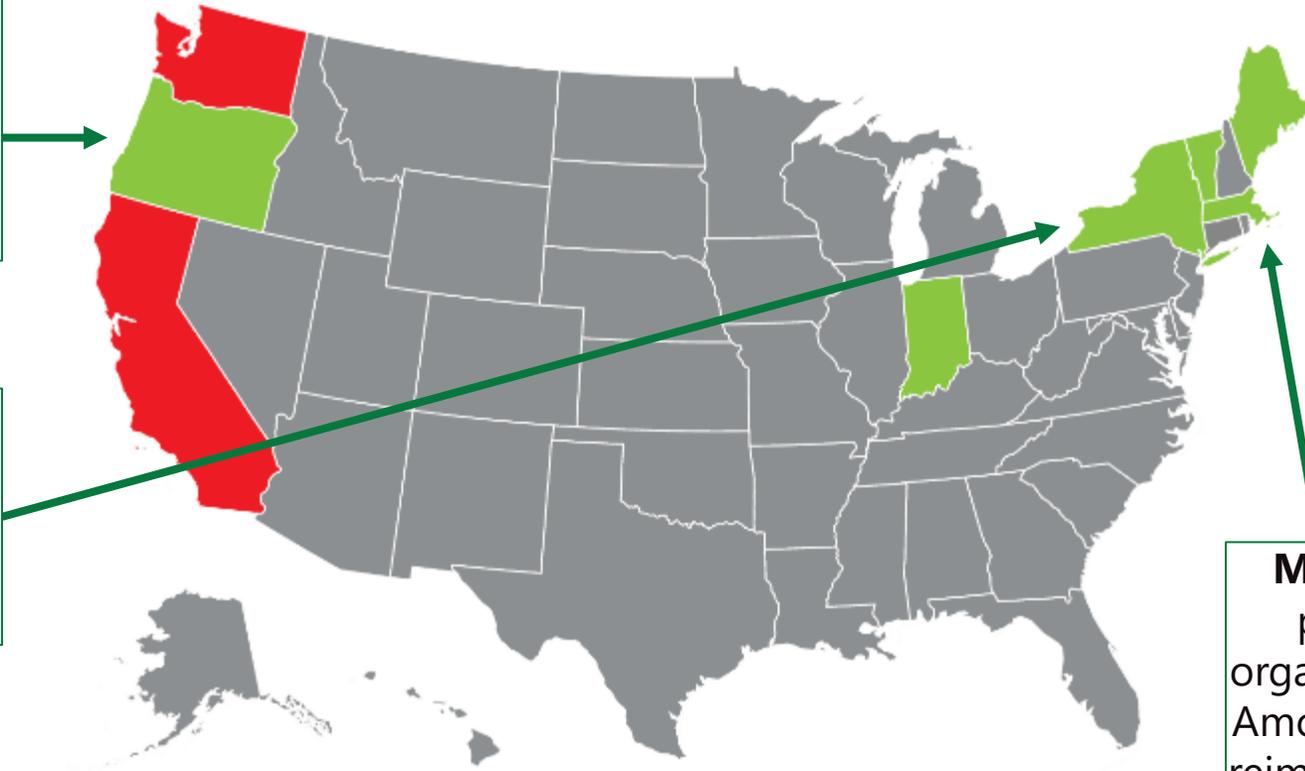
EPR BILLS IN THE USA

Oregon studying scenarios for better packaging waste management, including systems that incorporate aspects of packaging EPR.

New York introduced a pair of bills for packaging EPR, PCR requirement and collection targets on February 11, 2020.

Maine packaging EPR bill would ensure stewardship plans reflect use of recycled content, toxicity, etc.

Massachusetts bill would require producers to join responsibility organizations two years after passage. Amounts that municipalities would be reimbursed for recycling costs depend on contamination rates.



- Full Packaging EPR
- Plastic Packaging EPR

EXAMPLES OF STATES WITH EXPECTED 2021 PACKAGING EPR LEGISLATION

Colorado	Study Bill directs the state Department of Public Health and Environment to provide a plan by July 2021 for reshaping CO recycling markets, which could include EPR
Hawaii	A Plastic Source Reduction Working Group suggested EPR be considered as a mechanism to improve waste management. Considering introducing a PPP EPR bill in 2021
Illinois	Currently lacking in waste and recycling regulations but is currently considering a bottle bill, which would greatly increase recycling rates (especially in larger cities like Chicago) and would be a start to a producer-funded waste reduction journey
Maine	PPP EPR bill stalled in early 2020 due to the pandemic. Currently working to build public support for the bill for its reintroduction next year
Maryland	Introducing an EPR bill soon for packaging, containers and products
Massachusetts	Had a couple PPP EPR bills in 2020 that are expected to be introduced again during the 2021 session
New York	NY Product Stewardship Council is urging the Governor to include packaging EPR in the next executive budget bill.

GLOBAL PLASTICS PACTS

Established Plastics Pacts

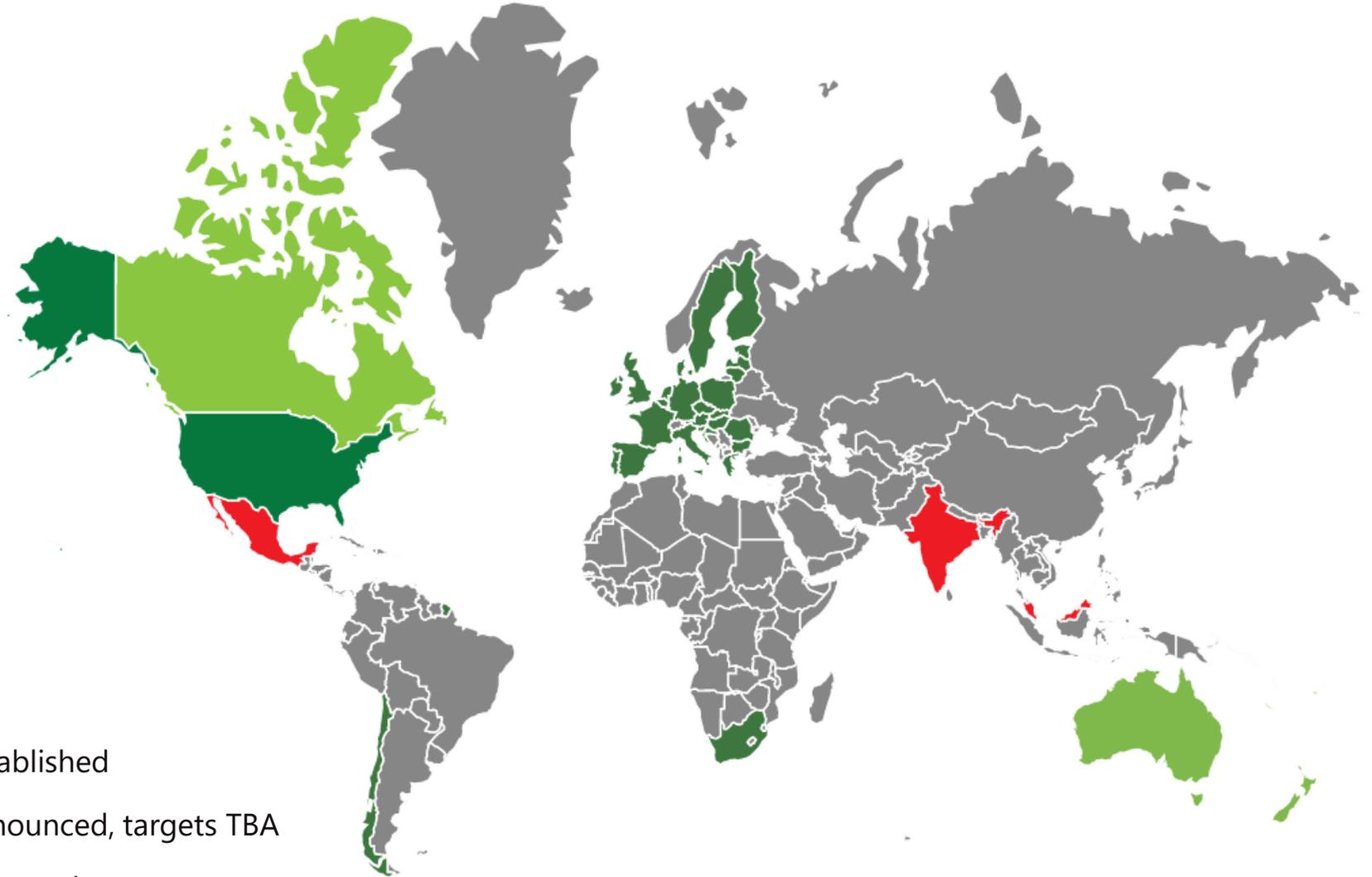
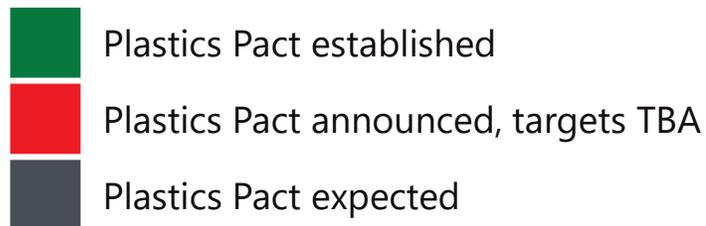
UK, France, Netherlands, Chile, South Africa, Portugal, Europe, USA, Poland

Announced Plastics Pacts

ANZPAC – launch Q1 2021,
Canada – launch Fall 2020

Expected Plastics Pacts

Malaysia, Mexico, India



GLOBAL PLASTICS PACTS GOALS AND TARGETS FOR 2025



	UK	France	Netherlands	Chile	South Africa	Portugal	Europe	USA	Poland
Education Initiatives		Lead awareness-raising and educational actions							Conduct educational initiatives for citizens
Elimination	Eliminate problematic/unnecessary single-use packaging	Establish a list of problematic or unnecessary packaging and take measures to eliminate them		Eliminate problematic or unnecessary plastic packaging and single-use utensils	Take action on problematic/unnecessary plastic packaging	Define a list of problematic/unnecessary SUP items and measures for their elimination by the end of 2020		Define a list of problematic/unnecessary packaging by 2021 and take measures to eliminate them by 2025	Eliminate unnecessary and problematic plastic packaging through redesign, innovation and alternative delivery methods
Reduction			Use 20% less plastic than in 2017				Reduce need for virgin plastics by 20%		Reduce virgin plastics by 30% compared with 2018
Recyclability	100% reusable, recyclable or compostable plastic packaging	100% reusable, recyclable or compostable packaging through eco-design	All single-use plastics reusable where possible and appropriate, and 100% recyclable	100% of plastic containers and packaging designed to be reusable, recyclable or compostable	100% reusable, recyclable or compostable plastic packaging	100% reusable, recyclable or compostable plastic packaging	All plastic packaging/SUPs reusable where possible, in all cases recyclable	100% reusable, recyclable or compostable plastic packaging	100% reusable or recyclable plastic packaging
Recycling Rate (Plastic Packaging)	70% recycled or composted	60% by 2022	70%	33% reused, recycled or composted	70%	70%	Increase collection, sorting and recycling capacity by 25%	50% recycled or composted	55%
Recycled Content	30%	30%	35%	25%	30%	30%	30%	30% (or "responsibly sourced bio-based content")	25%

US PLASTICS PACT LAUNCH

AUGUST 25, 2020

The US Plastics Pact officially launched recently. It is led by The Recycling Partnership and World Wildlife Fund as part of the Ellen MacArthur Foundation's global Plastics Pact network.

More than 60 companies, government agencies and NGOs have already joined the pact, committing to the four **2025 targets**:

1. Define a list of problematic and unnecessary packaging by 2021, and take measures to eliminate them by 2025
2. All plastic packaging to be 100% reusable, recyclable or compostable
3. Take actions to effectively recycle or compost 50% of plastic
4. Average recycled content or "responsibly sourced bio-based content" in plastic packaging to be 30%

Current members include Colgate, Nestle, Mondelez, Mars, Unilever, RB, Target and Walmart.

VOLUNTARY INDUSTRY COMMITMENTS

NEW PLASTICS ECONOMY GLOBAL COMMITMENT

The Ellen MacArthur Foundation (EMF) in collaboration with UN Environment launched the Global Commitment in October 2018, and it is the most ambitious EMF initiative to date.

500+ (and rapidly expanding) packaging producers, brands, retailers, recyclers, governments and NGOs – **companies representing over 20% of all plastic packaging produced worldwide** – have committed to:

- ✓ Take action to **eliminate** problematic or unnecessary plastic packaging by 2025
- ✓ Take action to move from single-use towards **reuse models** where relevant by 2025
- ✓ 100% of plastic packaging to be **reusable, recyclable or compostable by 2025**
- ✓ Set an ambitious 2025 **recycled content target** across all plastic packaging used

NPE: RETAILER COMMITMENTS FOR 2025

Company	Eliminate Problematic or Unnecessary Plastic Packaging	Move from Single-Use to Reuse Models	100% Reusable, Recyclable or Compostable Packaging	PCR Content Target	Plastic Packaging Volume
	Eliminate carbon black, PVC, PS, straws, cutlery, bags	Scale up use of reusable bags	Replacing non-recyclable packaging where alternatives exist	25%	Submitted to Foundation only
	Eliminate carbon black, PVC, PS, straws, cutlery, bags	Reusable containers and cotton bags, joined Loop in France	Redesigning packaging to phase out non-recyclable resins	25%	57,000 M tons
	Eliminate carbon black, PVC, PS, straws, cutlery, bags	Reusable coffee cup incentive, encouraging customers to reuse/reduce packaging	Only using PET, PE and PP from April 2020, rolling out plastic take-back scheme	30%	Submitted to Foundation only
	Eliminate EPS by 2022	Yet to commence	Add How2Recycle label by 2020, joined Materials Recovery for the Future collaborative	20%	Not reported
	Eliminate carbon black, PVC, PS	Reusable beverage cup incentive, exploring refill options	Created Walmart Recycling Playbook, add How2Recycle label in US by 2022, Canada by 2025	17%	Submitted to Foundation only
	Eliminate PVC, EPS, straws, cutlery, bags	Developed a low cost reusable shopping bag	Moving to single layer mono-material packaging, replacing difficult to recycle materials	30%	Submitted to Foundation only

ELLEN MACARTHUR FOUNDATION DEFINITION OF "RECYCLABLE"

Under EMF Guidelines, a packaging/packaging component is recyclable if:

- 
- A large green arrow on the left side of the slide points downwards, indicating the flow of information from the general definition to the specific criteria.
- ✓ Its successful post-consumer collection, sorting and recycling is proven to work **in practice and at scale**
 - ✓ Over 95% of packaging weight is recyclable and minor components are compatible with the recycling process and do not hinder the recyclability of main components
 - ✓ The design, manufacturing process and ways of using, disposing and collecting of the packaging do not hinder recyclability

"In practice and at scale" = 30% postconsumer recycling rate for at least 400 million inhabitants, or on markets where packaging is sold.

- ✓ Recyclable if over 95% of packaging by weight is recyclable and minor components are compatible with the process

EMF CALLS FOR EPR SCHEMES

The Ellen MacArthur Foundation calls on businesses and governments to “raise the ambition level.”



ELIMINATE

Set absolute (virgin) plastic reduction targets, underpinned by increased efforts on elimination and reuse



INNOVATE

Embark on a well-funded R&D agenda, focused on solutions such as new delivery models and new materials, in particular for flexible plastic and multi-materials (representing 80% of remaining macroplastics leakage into the ocean in 2040)



CIRCULATE

Set up mechanisms to provide stable, recurring funding of collection and recycling where industry pays its fair share, for example through Extended Producer Responsibility (EPR) schemes or equivalent voluntary initiatives

Image source: Ellen MacArthur Foundation. 'The Circular Economy Solution to Plastic Pollution.' July 2020.

FRANCE: CITEO 2021 RATES

CITEO introduced modulated fees for plastic packaging in 2020. For 2021 reporting, all plastic fees have gone up by about 13%.

	Plastic	2020 (EUR/kg)	2021 (EUR/kg)
😊	Bottle and vial in clear PET	0.2888	0.3302
	Bottle and vial in colored PET, PE or PP	0.3092	0.3526
▲	Rigid packaging in PE, in PP or PET	0.3330	0.3793
😐	Flexible PE packaging	0.3608	0.4109
▲	Rigid PS packaging	0.3885	0.4425
😞	Complex packaging/other resins excluding PVC	0.4163	0.4741
	Packaging containing PVC	0.4857	0.5531

LEVEL OF DEVELOPMENT OF THE RECYCLING CHANNEL

FRANCE: CITEO 2021 RATES

PENALTY (MALUS) FEES

Level 1 penalties with a 10% rate:

- **Rigid PE/PP plastics** with a density greater than 1

Level 2 penalties with a 50% rate:

- **Glass** with a non-magnetic steel closing system; other than soda-lime; or soda-lime with non-separable contaminants (porcelain, ceramic, etc.)
- **Cardboard/paper packaging** that is reinforced or contains inks manufactured with the addition of mineral oils
- **Rigid plastics** containing carbon black or are otherwise not detectable by optical sorting
- **Bottle and vial in PET** containing glass beads

Level 3 penalties with a 100% rate:

- **Bottle and vial in PET** combined with aluminum, PVC or silicone with density greater than 1; or opacity > 4%
- **Bottle and vial in PVC**

FRANCE: CITEO 2021 RATES

BONUS (DISCOUNT) FEES

For Awareness Raising:

- **8%** for using complete sorting guidelines for all packaging units including Triman logo
- **5%** for using the Triman logo without related sorting instructions
- **4%** for awareness actions on sorting, such as on TV/radio, display, press or digital medium with purchase of space

For Reduction at the Source:

- **8%** for recyclability improvement (i.e. switching to a mono-material packaging system or reducing packaging units in a sales unit)

For Integrating Recycled Materials:

- **50%** for PE or PP packaging containing at least 20% PCR
- **30%** for PE or PP packaging containing less than 20% PCR
- **20%** for PS packaging containing at least 50% PCR



Triman logo:

Mandatory in France. Its purpose is to provide a more understandable symbol for consumers to know what is recyclable (replaces Green Dot)

ITALY: CONAI 2021 FEES



Material	2020 Fee (EUR/kg)	2021 Fee (EUR/kg)	% Increase
Steel	0.003	0.018	500%
Aluminum	0.015	0.015	0%
Paper	0.055	0.055	0%
Paper (multimaterial)*	0.075	0.075	0%
Wood	0.009	0.009	0%
Plastic Level A	0.150	0.150	0%
Plastic Level B1	0.208	0.208	0%
Plastic Level B2	0.436	0.560	28.4%
Plastic Level C	0.546	0.660	20.9%
Glass	0.031	0.037	19.4%

*Higher paper category = mainly paper packaging, coupled with plastic and sometimes aluminum material. Includes beverage cartons and some food packaging.

CONAI PLASTIC CATEGORIES

Plastic Fee Categories

Level A – Packaging with an effective and consolidated industrial sorting and recycling chain, mainly from the Commerce & Industry circuit	Liners, bags for industrial use, over-wrap shrink film, bubble wrap/air cushions (monopolymer and non-foam), crates, water dispenser bottles/caps, pallets, cans over 5L, etc.
Level B1 – Packaging with an effective and consolidated industrial sorting and recycling chain, mainly from the household circuit	PET/HDPE bottles and jars (monopolymer) up to 5L (if they have a full bottle sleeve, must have perforations to easily remove)
Level B2 – Packaging with an industrial sorting and recycling chain in the process of consolidation and development, from household and/or C&I circuit	Reusable bags, lightweight bags, HDPE bottles with sortable black coloring, mechanical dispensers, PE/PP labels, PE flexible packaging, monopolymer PP or multilayer, etc.
Level C – Packaging with experimental sorting/recycling activities in progress or not sortable/recyclable with current technologies	Opaque PET bottles/jars, bottles/jars with non-removable full bottle sleeves, bottles/jars made with polymers other than PET and PE, nonsortable bottles/cans, beverage system capsules (coffee pods), etc.

CONAI PAPER CATEGORIES

EFFECTIVE OCTOBER 1, 2020

Conai launched a year-long pilot to collect data on the different levels of poly laminated paper that is being put onto the market.

Category	Description
Single material	> =95% paper material
Type A poly laminates	Paper component \geq 90% and < 95%, other than CPL
Type B poly laminates	Paper component \geq 80% and < 90%, other than CPL
Type C poly laminates	Paper component \geq 60% and < 80%, other than CPL
Type D poly laminates	Paper component > 50% and < 60%, other than CPL
Poly laminates unspecified	Poly laminated packaging with unspecified paper component, other than CPL
CPL	Containers for Liquids (previously 'poly laminates suitable for containing liquids')

There are no differentiated fees for different poly laminates yet. However, Conai has said to expect fees on Type C & D to be announced once the pilot is over, no earlier than October 2021.

SWEDEN – FTI 2021

HOUSEHOLD PACKAGING

Material	2020 Fee (SEK/kg)	2021 Fee (SEK/kg)	% Increase
Paper (high)	3.28	3.43	4.6%
Paper (low)	2.23	2.24	0.4%
Plastic (high)	5.22	8.56	64%
Plastic (low)	3.47	5.52	59.1%
Aluminum	2.21	8.00	262%
Steel	3.59	4.20	17%

Beginning in 2020, a **new fee structure applies for paper packaging** in order to “reflect the actual costs of recycling and to promote an increase in the share of recyclable packaging.”

Level 1 fee: 3.43 SEK/kg

- All paper packaging containing mixed/glue material.

Level 2 fee 2.24 SEK/kg

- All paper packaging consisting solely of paper:
 - No wax, aluminum, plastic, etc. barriers
 - No plastic “windows”
 - No composites, wet-strength paper or wax-treated paper

FTI 2021 FEES FOR PASTA BOXES/1,000 UNITS



Pasta box w/o window	Pasta box w/ window
\$6.11	\$9.36

Exchange rate (Nov 2020): 1 SEK = 0.12 USD

SWEDEN – FTI

MODULATED FEES FOR PLASTIC PACKAGING

As of April 1, 2019, there are now two plastic categories with different fees. For 2021:

- **Level 1 fee: 8.56 SEK/kg**
- **Level 2 fee: 5.52 SEK/kg**
 - Made from recommended types of plastic, i.e. PE, PP (excluding film) and transparent PET bottles
 - NOT black
 - Less than 2% EVOH barrier material
 - Not laminate
 - Maximum 60% printed area
 - No shrink sleeve made from other types of plastic than the packaging

	Sorting	Treatment	Purchaser
LDPE foil	✓	✓	✓
PP	✓	✓	✓
HDPE	✓	✓	✓
PET trays and bottles*	✓	✓	Limited market
PP foil	✓	✓	Limited market
Other foil	✓	✓	Limited market
PVC	✓	✓	Limited market
PS	✓	Amount too low	-
EPS	✓	Technique not available	-
PLA	✓	Technique not available	-
Other biodegradable	Technique not available	Technique not available	-
OXO-degradable	Technique not available	Technique not available	-

*Materials from transparent PET bottles (such as canola or corn oil) have a market and can therefore be considered recyclable, unlike PET trays and colored PET bottles.

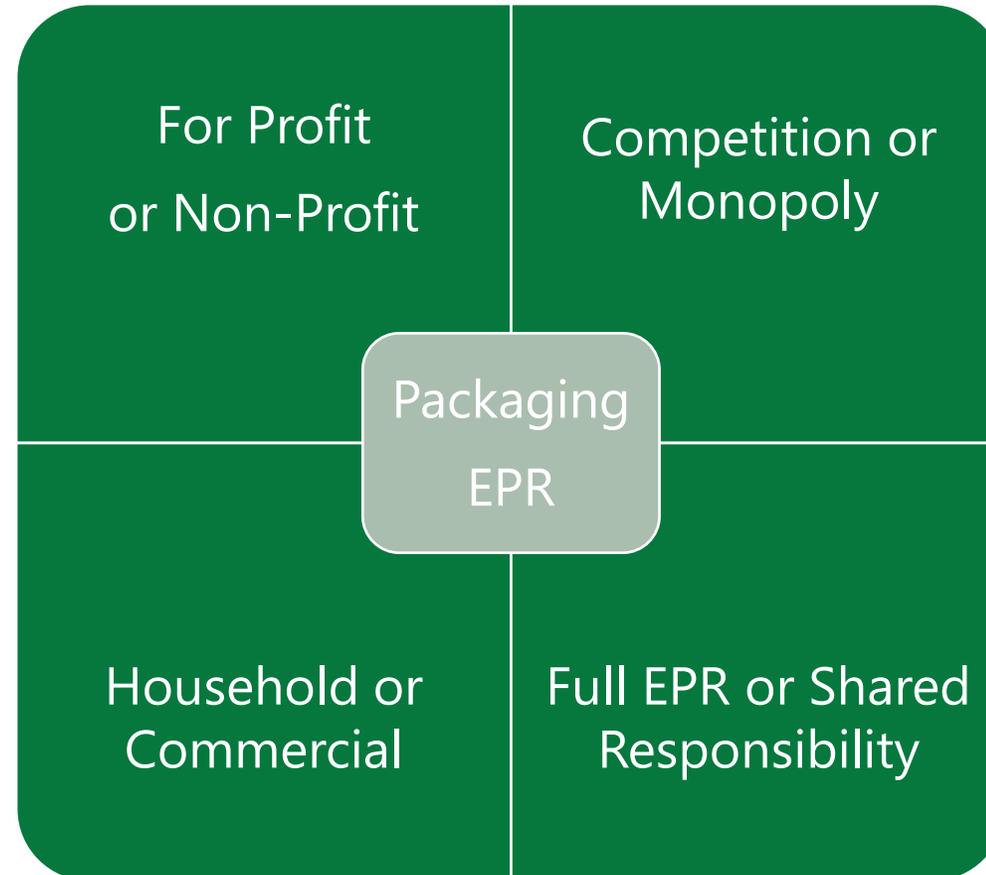
TYPES OF PRO – PACKAGING EPR

For Profit: UK, Austria, Germany

Non-Profit: Canada, Belgium

France / Canada: Household only

Spain / UK: Commercial included



UK: Currently 20+ schemes but considering a move to one non-profit scheme.

Germany: Several schemes, and as of 2019 producers must also report to the government.

Many countries moving toward 100% producer responsibility.

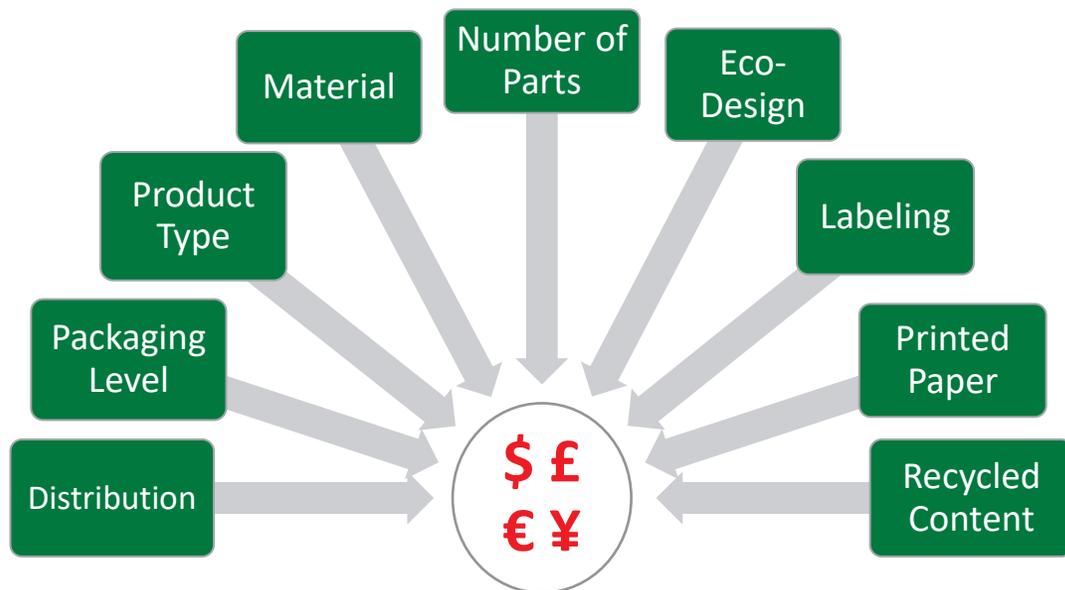
BURDEN OF REPORTING

- In the US, brand owners and retailers often do not have data necessary for accurate packaging EPR reports – they require time to gather it.
 - **Solution:** Establish a transitional period for companies to use estimated data, then require real data reporting (typically more advantageous for producers)
- Many programs upon startup will use a **simple fee calculator**, which potentially costs companies more than using real data – phase out simple fee calculator over time.
 - Many programs also have a **flat fee option for small stewards** (\$1M to \$5M).
 - Many programs also require **reviews by a fiscal auditor**.

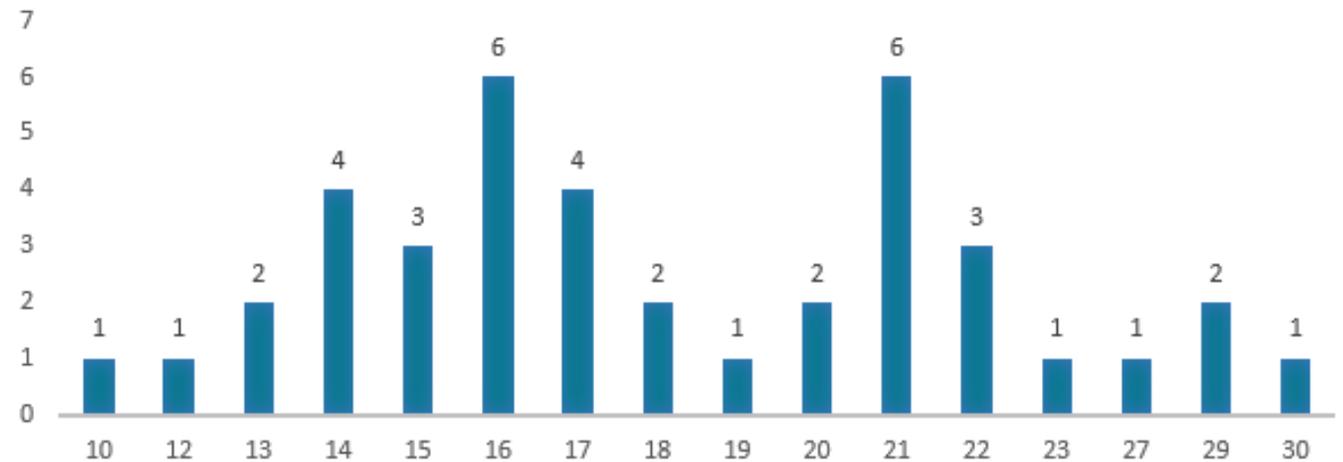
DATA, DATA & MORE DATA

REPORTING COMPLEXITY

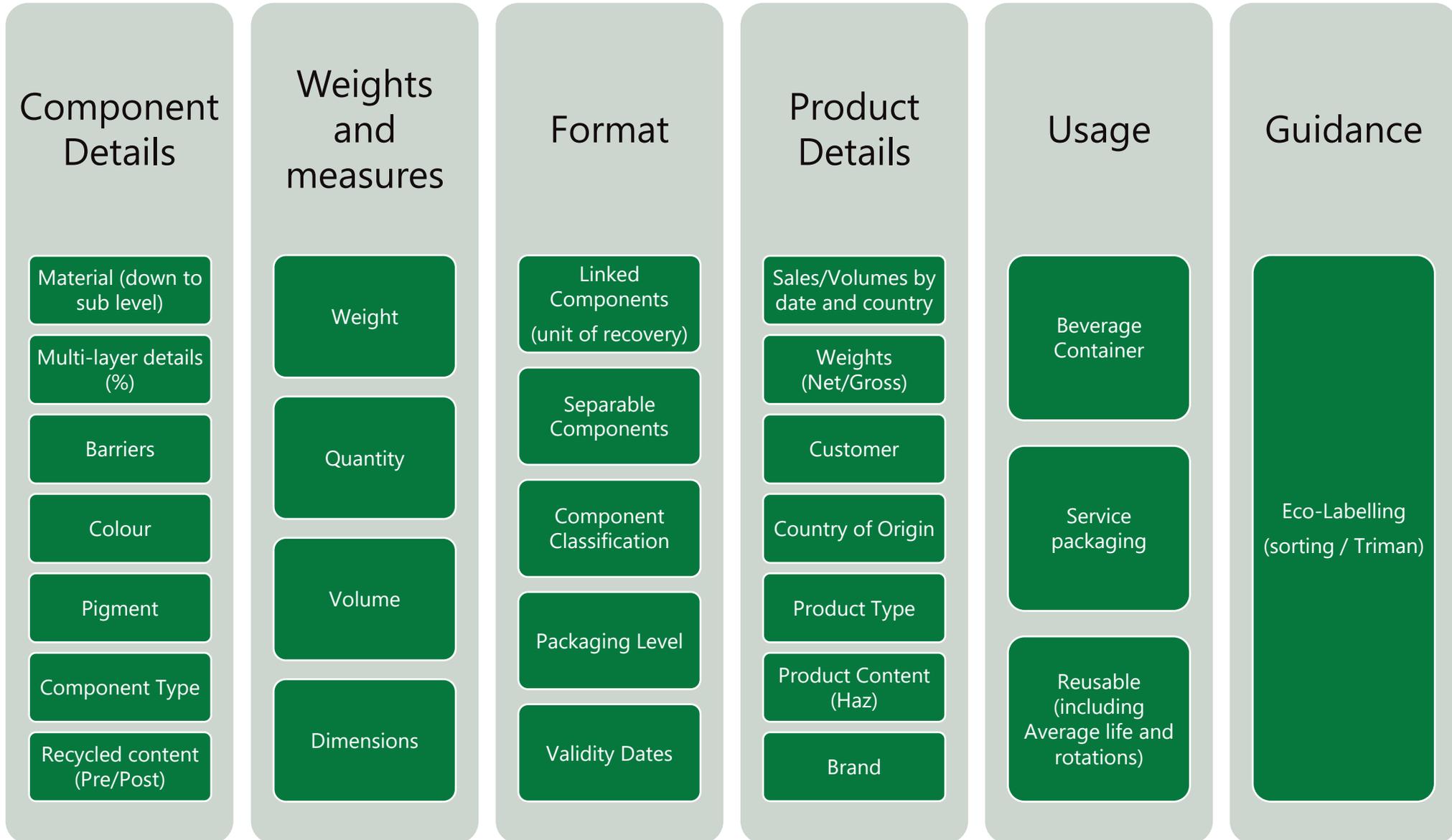
- Little harmonization
- Fee structure complexity
- Extensive data collection to take advantage of modulation



NUMBER OF REPORTING DATA POINTS FOR ALL PACKAGING EPR PROGRAMS (2020)



MAJOR DATA POINTS



EPR FEES COMPARISON

BABY FOOD PACKAGING

Glass Jar (128 ml)



- Clear glass: 89 g
- Metal lid: 6.3 g
- Paper label: 0.6 g

Multilayer Pouch (128 ml)



- Flexible resin pouch: 5.76 g
- Plastic closure: 2.78 g

2-Pack Plastic Pot/Lid (100 ml per unit)



- Plastic pot/lid: 9.74 g
- Plastic lid film: 0.75 g
- Carton sleeve: 2.9 g

USD/1,000 units Rounded	Canada		Belgium	France	Italy
	BC	Ontario			
Glass Jar	\$21	\$6	\$6	\$2	\$4
Multilayer Pouch	\$8	\$2	\$8	\$5	\$7
2-Pack Plastic Pot/Lid	\$10	\$2	\$11	\$6	\$8

Exchange rates (November 2020): CAD = 0.77 USD; EUR = 1.19 USD

EPR FEES COMPARISON

COFFEE CONTAINERS

Steel Can (283 g)



- Steel can: 108.5 g
- PP label: 1.9 g
- Aluminum seal: 1.8 g
- HDPE cap: 5.8 g

Plastic Canister (292 g)



- HDPE can: 68.5 g
- PP label: 1.1 g
- Multi-material film seal: 1 g
- LDPE cap: 10.2 g

Flexible Pouch (311 g)



- Plastic/aluminum blend pouch: 17 g
- LDPE closure strip: 1.5 g

USD/1,000 units
Rounded

	Canada		Belgium	France	Italy
	BC	Ontario			
Steel Can	\$39	\$7	\$27	\$10	\$5
Plastic Canister	\$50	\$11	\$42	\$30	\$25
Flexible Pouch	\$15	\$5	\$48	\$10	\$14

Exchange rates (November 2020): CAD = 0.77 USD; EUR = 1.19 USD

EPR FEES COMPARISON

CEREAL PACKAGING

Boxes with Liners (x2) (736 g for 2)



- Boxboard: 67.22 g
- PE film bag: 6.65 g

Plastic Bag (793 g)



- Plastic film: 21.67 g

USD/1,000 units Rounded	Canada		Belgium	France	Italy
	BC	Ontario			
2 Boxes w/ Liner	\$27	\$8	\$17	\$17	\$8
Bag	\$19	\$5	\$24	\$11	\$14

Exchange rates (November 2020): CAD = 0.77 USD; EUR = 1.19 USD

EPR FEES COMPARISON

YOGURT CONTAINERS

Glass Yogurt Container

(141 g)



- Clear glass container: 131.24 g
- Aluminum lid: 0.87 g
- Paper label: 0.2 g

Plastic Yogurt Container

(150 g)



- PP plastic container: 9.18 g
- Aluminum lid: 0.84 g

USD/1,000 units
Rounded

	Canada		Belgium	France	Italy
	BC	Ontario			
Glass Container	\$29	\$8	\$8	\$2	\$6
Plastic Container	\$8	\$2	\$5	\$4	\$6

Exchange rates (November 2020): CAD = 0.77 USD; EUR = 1.19 USD

EPR FEES COMPARISON

E-COMMERCE



Corrugated (138.7 g)
HDPE (5.7 g)



LDPE (21.7 g)



Paper Laminate (21.7 g)



LDPE (17.2 g)

USD/1,000 units Rounded	Canada		Belgium	France	Italy
	BC	Ontario			
Shipping Box w/ Air Pillow	\$50	\$15	\$26	\$30	\$13
Plastic Bubble Mailer	\$19	\$5	\$24	\$10	\$14
Paper Bubble Mailer	\$12	\$4	\$30	\$11	\$2
Plastic Bag Mailer (no bubble)	\$14	\$4	\$19	\$7	\$12

Exchange rates (November 2020): CAD = 0.77 USD; EUR = 1.19 USD



Questions?

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